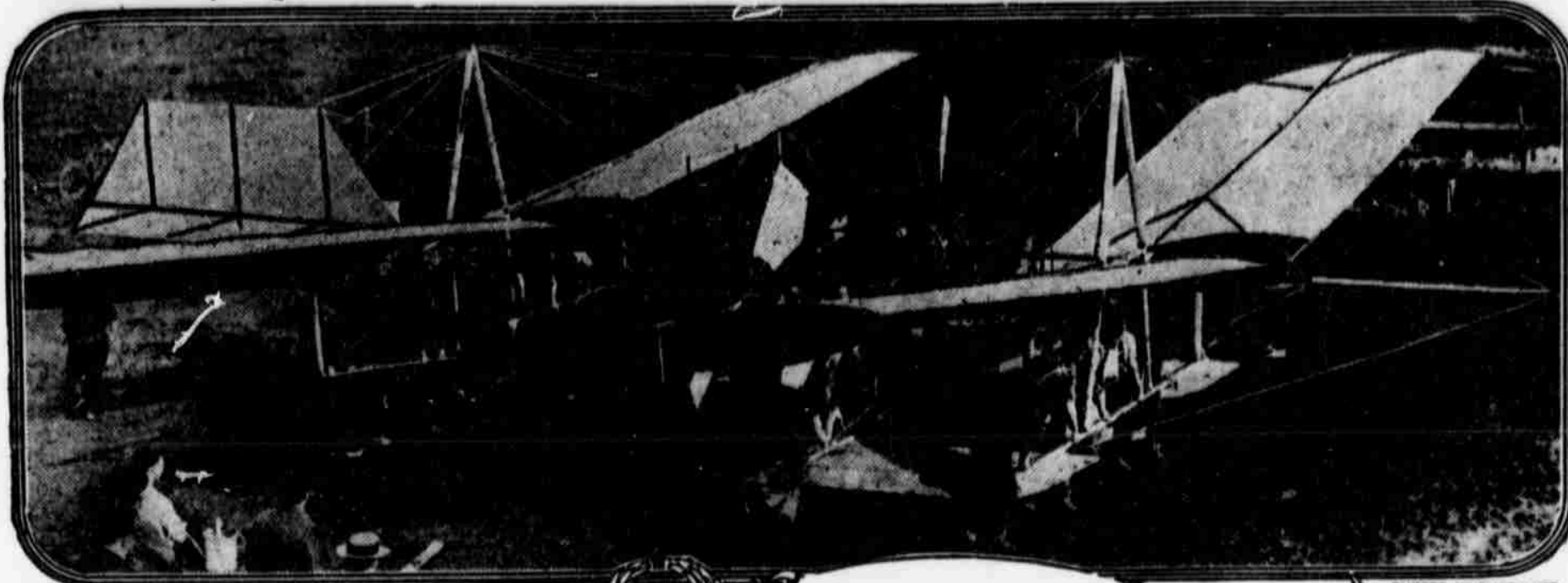


# "LANGLEY'S FOLLY" VINDICATED



GETTING READY FOR THE TRIAL

**P**ROF. SAMUEL P. LANGLEY'S memory has been vindicated. Glenn H. Curtiss has proved that the man who died of a broken heart because of the failure of his aeroplane was the first to construct a really practical heavier-than-air machine. Mr. Curtiss secured permission to take the Langley machine from the Smithsonian Institute in Washington for the purpose of making tests. He made no changes whatever in the machine, merely restoring such parts as were broken. He made a short flight, demonstrating that Langley's principles were right and that the sole fault lay in the method of launching the machine.

Scientists long ago accorded to Professor Langley the full measure of credit due to him. The Wright brothers, who made a practical success where he had seemed to fail, have acknowledged the debt they owe to this unassuming man who drew his inspiration from the clouds and gave to man the eagle's secret. He had worked out for them the problems in aerodynamics, and left for them in algebraic formulae the data upon which all mechanical flight is based.

But in the mind of the public Langley was a failure, and Langley's aeroplane, tried and wrecked at historic Widewater, Va., on October 7, 1903, is "Langley's folly" now, as it was then, when the secretary of the Smithsonian Institution returned North, stung by unjust and unthinking criticisms, but undaunted, and confident that he was on the "right track," determined to go ahead, a determination that was thwarted by his untimely death in 1906.

The history of invention has no record more pathetic than that of Samuel P. Langley. At the very moment when success was in his grasp, when the dreams of a lifetime were about to come true and the labors of years of toil to be rewarded, the cup was dashed from his lips through the failure, not of the invention itself, but of a purely mechanical contrivance of minor importance. Derided in congress and held up by the newspaper wits of the world as a target for their jests, Langley must have died a thoroughly discouraged man.

The experiments of 1903 were the culmination of years of patient effort. As far back as 1891 Professor Langley announced that as the result of experiments carried on by him during previous years it was "possible to construct machines which would give such a velocity to inclined surfaces that bodies indefinitely heavier than the air could be sustained upon it, and moved through it with great velocity."

President McKinley had become impressed with the possibilities of the airship as an engine of war, and in 1898, at the request of the board of ordnance and fortification of the war department, Professor Langley undertook the construction of a man-carrying flying machine, and an allotment of \$50,000 was made for the purpose. The services of Charles M. Manly were secured as an assistant.

In his earlier tests with models Professor Langley had employed a small houseboat, from the roof of which he had launched them. He determined to follow the same procedure with the larger man-carrying airship, and, although advised not to do so, he persisted until the end in this determination. And it was the launching apparatus which caused the final failure!

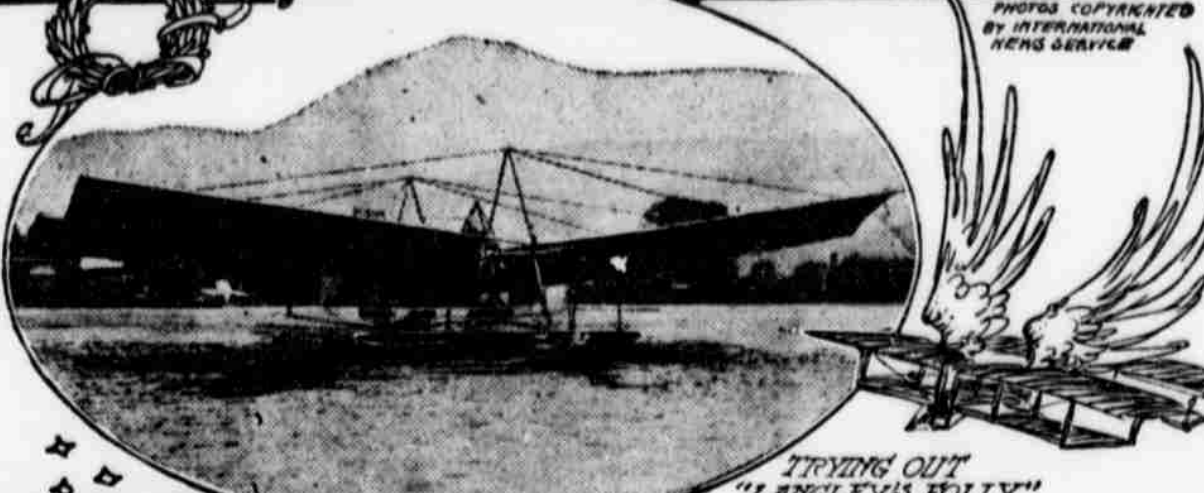
An enormous houseboat, therefore, was built. Atop the house was the superstructure carrying a turntable, weighing about fifteen tons, supported on a circular track, an arrangement which was designed to make it possible for the aeroplane to be launched from the "roof," headed into the wind, without the necessity of turning the entire houseboat.

Finally on August 8 a quarter-size steam-driven model was launched from the top of the houseboat. It was in the air 27 seconds and covered about one thousand feet. The experiment was regarded as a success and gave the inventors great hopes for the success of the man-carrying machine. Numerous delays occurred to prevent the launching of this, and it was not until October 7 that the real Langley aeroplane was sent forth into the air, the first heavier-than-air machine carrying a man ever to attempt a flight.

A few days before this date the reporters at Widewater received from their home offices queries reading about as follows:

"Two brothers named Wright are said to be experimenting with an airship at Kitty Hawk, N. C. Ask Langley what he knows about it."

It was the first time any man in the reporters' camp had ever heard of those famous brothers from Dayton, Orville and Wilbur Wright. Not a



TRYING OUT "LANGLEY'S FOLLY"



LEFT TO RIGHT: DR. CHARLES WALCOTT OF SMITHSONIAN INSTITUTION, GLEN CURTISS, MISS WALCOTT, DR. A. F. ZAHN, C. C. WITTNER AND "LANGLEY'S FOLLY"



GLEN CURTIS AT WHEEL OF "LANGLEY'S FOLLY"

them broke as it struck the water a powerful blow.

Then the whole airship, every vestige of it, even to the tip of its beautiful white tail, disappeared beneath the surface of the river.

Suddenly the soldier on the houseboat came to life and shouted a command. A boat was tied at the stern, and into this a squad of workmen threw themselves, and pulled off for the scene of the disaster. Then the airship floated to the surface, and Mr. Manly's head bobbed up.

There was half a smile on his face, but no sign of fear, although he was not yet saved. Entangled in the wreckage, his lifebelt did him but little service. However, he managed to hold himself up until the first boat to reach the spot came up, when he was hauled aboard, none the worse for his ducking.

The official explanation of the failure was that the front guypost caught in its support on the launching apparatus and was not released in time to give free flight, as intended, but caused the front of the machine to be dragged downward, bending the guypost and causing the aeroplane to plunge into the water.

Discouraged, but not disheartened, Mr. Manly took the wrecked machine back to Washington. It was growing late in the year. The available fund of money was about exhausted, and it was realized that unless a better showing could be made there would be no more funds forthcoming from congress. Workmen were set to the task of getting the aeroplane ready for another flight before winter set in.

Although the main frame and the engine were not damaged, other delicate portions were so badly injured that two months were required for the repairs to be made, and it was not until December 8 that everything was in readiness for another flight. Despite the lateness of the season, Mr. Manly determined to make one more effort to prove that the Langley aeroplane would fly.

It was bitterly cold, and there was ice on the river when, on the afternoon of December 8, between four and five o'clock, the houseboat was towed from her berth at one of the wharves at Washington to Arsenal point, where the eastern branch enters the Potomac. Here was a space barely sufficient for the requirements of the aviator in his extremity.

The engine worked perfectly as the propellers were set in motion. But again the launching apparatus was at fault. This time the rear guy post seemed to catch, bringing the rudder, or tail, down on the superstructure. As the aeroplane, looking ghostly in the deepening night, shot over the edge of the houseboat, her nose pointed toward the arsenal, there was a grinding noise. The rear wings collapsed, the whole machine plunged downward, and Mr. Manly for the second time was carried beneath the waves.

This time his escape was narrower than it had been at Widewater in October. In the darkness and confusion his location was lost sight of, and while men looked for him in small boats he remained beneath the water tangled in the wreckage, stunned, and with his head cut open. He was found just in the nick of time, taken aboard the houseboat and resuscitated.

The workmen toiled until midnight in the icy waters recovering the wrecked airship. Twice saved from the waters of the Potomac. The aeroplane was finally taken to the Smithsonian shops, where it was partially repaired. It has been stored there until its recent removal to Hammondsport for its third attempt at flying.

## GOOD ALFALFA POINTS

PROPER PREPARATION OF SEED BED MEANS SUCCESS.

Plant is Deep-Rooted Perennial and Exceedingly Delicate the First Month of Its Life—Deep Plowing is Necessary.

Frequently the question is asked me what I consider the basis of my success with alfalfa. While there is no one thing which insures success yet the proper preparation of the seed bed is the very foundation upon which the whole matter rests.

Let us inquire what constitutes a proper seed bed, and by what means it is best obtained. The natural characteristics of the alfalfa plant are now so well known that we need only mention them. It is a deep rooted perennial, possibly the deepest rooted plant with which the farmer has to deal. It is an exceedingly delicate plant the first month of its life. Therefore the proper seed bed would be such a one as will foster the deep root growth and at the same time protect the tender plant. Let us take up the former.

If you will dig up an alfalfa plant two weeks old, one that has but four or six leaves, you will find a root six, seven or eight inches long, as slender as a thread and as delicate as a nerve, writes Boyd Hyron Hobbs in the Dakota Farmer. Mere common sense will tell you that such a slender, tender rootlet is not capable of penetrating a hard, dry subsoil, much less the glazed plow-sole which so habitually exists under a five or six-inch plowing persisted in by the farmer for a number of years.

Deep Plowing the Thing.

Plainly then, we must plow deeper. How deep? Twelve inches is the minimum—twenty is much better. How can we plow 20 inches deep? There are several makes of deep going plows and subsoilers on the market, all of merit, but of them all I consider the deep tilling machine far and away the best. Not only will it plow 20 inches deep or anywhere from 12 to 20, but it will do it with less traction power than any other implement, and it will do it better for it thoroughly pulverizes all of the ground turned. This is a very important process not only in preparing an alfalfa seed bed, but also for any seed bed whatsoever.

And what should be the condition of the 20 inches of plowed ground? It should be finely pulverized, packed only slightly, and contain as much moisture as is ordinarily required for any crop. This deep tilled soil is also in the very best possible condition to receive the heavy showers which so frequently occur in this semi-arid climate, and is especially fitted to admit the moisture into the subsoil. The subsoil should contain a fair quantity of moisture before the alfalfa is planted, or at the time of planting. Now when the fine alfalfa rootlet begins to penetrate the finely pulverized top soil it goes straight down, passes readily into the moist subsoil and goes on its way rejoicing—how deep I dare not guess but I have seen alfalfa roots 28 feet long and I didn't see the end of them then. It is seen, therefore, that deep tilling is quite essential to promote the natural growth and development of the alfalfa plant.

Dairying Conserves Fertility.

By marketing the products of the farm in the form of butter or cream, only five per cent of the fertility contained in the farm crops is sold in the product. By marketing corn, wheat, hay, etc., practically all the fertility required to grow the crop is sold from the farm. By feeding raw materials to the dairy cows, the farmer is not only manufacturing high-priced products, but retaining upon the farm all the fertilizing material taken from the soil by the growing crop.

Suckering Tomato Plants.

After the tomato plants start to grow they should be gone through very carefully and all of the suckers removed, so that the strength will go to the main stalk. This will cause the fruit to ripen much better.

Tomatoes will grow on almost any kind of soil, but it must be made very rich by the use of good, well-rotted stable manure.

Care of Manure Spreader.

After manure has passed through the manure spreader, the particles and dampness left on it will cause the most deteriorating effect if the machine is left exposed to the sun and wind. Good shedding is a cheap preventive of such deterioration.

Plowing Deep for Root Plants.

When plowing the land for parsnips and other deep-growing root plants, plow deep and keep the manure down deep; otherwise you will have a lot of surface roots instead of the long, straight roots desired.

Care of Stable Floor.

It does not matter so much what sort of a floor is put in as the care taken of it. Plenty of bedding must be used at all times. If cement is used, rough-finish it to prevent slipping and crippling.

Weaning the Colts.

Weaning the colts too soon is worse than any treatment they may get. Let them run with the mare as long as they can if she is not working.

## SICK? TIRED? WEAK?

If this describes your present condition you should immediately get a bottle of

## HOSTETTER'S STOMACH BITTERS

It will help Nature overcome all Stomach, Liver and Bowel ills, restore the appetite, promote health and vigor.

## FURNISHED BOND OF AMITY

Discomfited "Good Samaritan" the Unwilling Means of Bringing Rival Humorists Together.

Once upon a time two humorists dwelt in the same small town and both contributed to the Sunday Star. As was but natural, they became wildly jealous of each other, and when one would win a little more prominence than his fellow the other would have seven kinds of fits. "Your Pleasant Valley Items give me a pain!" quoth one. "Your prose rhymes make me ill!" retorted the other. As they were about to come to blows there appeared on the scene a Good Samaritan and to him they appealed. "Which of us is the funnier?" they asked. "Neither!" was the prompt reply. "You are both as unfunny as wart hogs, and as tiresome as a trip across the Sahara!" Thereat they both set upon the gentleman from Samaria and beat him full sore, and dwelt together in amity forever after.

Moral: From this we should learn that while humorists delight in quarreling among themselves, they frequently resent criticism from outsiders.—Kansas City Star.

## A Fish Story.

"The Inns of dear old England are picturesque," said Richard Le Gallienne, on his return from abroad, "but the food they serve is something terrible."

"After a visit to Blenheim palace I entered an inn in the quaint village of Woodstock. As I lunched—or tried to lunch—my landlord said to me:

"The great dork of Marlborough once sat in that chair you're a settin' in, sir."

"Is that so?" said I.

"And the dork once drunk 'is beer out of' that same mug you're a-drinkin' out of."

"And I bet," said I, "I bet he refused to eat this fish, too. Well, take it away, my man. I don't want it, either."

## An Apposite Choice.

Bishop Evans Tyree at a dinner in Nashville was asked if he had any idea of preaching on the new fashions—the backless evening gown, slashed skirt and so forth.

"No," said the bishop; "such an idea has not occurred to me. If, however, I should preach on the new fashions I would assuredly choose my text from Revelation."

Domestic discord is the apple. The man in the case gets the core.

## WRONG BREAKFAST. Change Gave Rugged Health.

Many persons think that for strength, they must begin the day with a breakfast of meat and other heavy foods. This is a mistake as anyone can easily discover for himself.

A W. Va. carpenter's experience may benefit others. He writes:

"I used to be a very heavy breakfast eater but finally indigestion caused me such distress, I became afraid to eat anything."

"My wife suggested a trial of Grape-Nuts and as I had to eat something or starve, I concluded to take her advice. She fixed me up a dish and I remarked at the time that the quality was all right, but the quantity was too small—I wanted a saucerful."

"But she said a small amount of Grape-Nuts went a long way and that I must eat it according to directions. So I started in with Grape-Nuts and cream, two soft boiled eggs and some crisp toast for breakfast."

"I cut out meats and a lot of other stuff I had been used to eating all my life and was gratified to see that I was getting better right along. I concluded I had struck the right thing and stuck to it. I had not only been eating improper food, but too much."

"I was working at the carpenter's trade at that time and thought that unless I had a hearty breakfast with plenty of meat, I would lay out before dinner. But after a few days of my 'new breakfast' I found I could do more work, felt better in every way, and now I am not bothered with indigestion."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.